



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 55 TO FACILITY OPERATING LICENSE NO. NPF-58  
THE CLEVELAND ELECTRIC ILLUMINATING COMPANY, ET AL.  
PERRY NUCLEAR POWER PLANT, UNIT NO. 1

DOCKET NO. 50-440

1.0 INTRODUCTION

By letter dated September 23, 1991, Cleveland Electric Illuminating Company (the licensee) requested a revision to the Technical Specifications (TS) for the Perry Nuclear Power Plant, Unit No. 1. The proposed amendment would revise TS 3.1.3.3 "Control Rod Scram Accumulators," to allow an alternate method for verifying that a control rod drive (CRD) pump is operating. Such verification is required with more than one control rod scram accumulator inoperable. The existing Perry TS requires that at least one control rod be inserted at least one notch as a verification that a CRD pump is operating. The proposed change would allow alternate verification that a CRD pump is running by direct indication of the control rod charging water header pressure.

2.0 EVALUATION

The CRD pumps supply water to the hydraulic control units (HCUs) for insertion and withdrawal of control rods, charging of the scram accumulators, and the cooling of the control rod drive mechanisms. There is one HCU per control rod. The control rod scram accumulators are located on the HCUs and ensure that the control rods scram at any reactor pressure within the required scram insertion times of TS 3.1.3.2. The operating CRD pump provides water at approximately 1720 psig to the charging water header. A check valve in each accumulator charging line prevents the loss of pressure for a limited time, when supply pressure from the CRD pump is lost. Check valve integrity is verified each refueling outage.

Perry has had an occurrence where power was lost to the Rod Control and Information System. Upon this loss of power, control rods cannot be moved (except by scram) and accumulator status indication is lost. Under current TS, operators would have an inappropriately short time to fix the problem because of the inability to insert a control rod one notch to verify an operating CRD pump. The proposed alternate CRD pump operating verification method would avoid the above TS problem and result in a more appropriate amount of time to fix the plant problem. Charging water header pressure in excess of 1520 psig is acceptable as an alternate verification method, because if a CRD pump is not operating, CRD system pressure decreases rapidly due to cooling water flow discharging to the reactor vessel. However, the primary and preferred verification method is by inserting a control rod one notch.

The NRC staff has reviewed the licensee's proposed alternate method to verify an operating CRD pump, and based on the above, finds it to be acceptable.

### 3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Ohio State official was notified of the proposed issuance of the amendment. The State official had no comments.

### 4.0 ENVIRONMENTAL CONSIDERATION

This amendment changes a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that this amendment involves no significant hazards consideration and there has been no public comment on such finding (56 FR 57705). Accordingly, this amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of this amendment.

### 5.0 CONCLUSION

The staff has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

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Date: February 14, 1994